

REMARKS

Entry of the foregoing, reexamination and reconsideration of the application identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.111 and in light of the remarks which follow, are respectfully requested.

By the above amendments, claims 1, 10 and 12 have been amended for clarification purposes by deleting the general formula (II), and reciting that A represents a group represented by one of general formulae (IV) and (VI) to (XX). Support for these amendments can be found in the specification at least at pages 12-16. Claims 1, 10 and 12 have also been amended for readability purposes by deleting the phrase "one of," by replacing "and" with "or," and by adding the word "and" between "ring," and "any." Claims 1, 10 and 12 have also been amended for clarification by reciting that R_1 and R_9-R_{13} each independently represents a hydrogen atom or a substituent, and that EWG represents an electron-withdrawing group having a Hammett's substituent constant σ_p value of 0.35 or more. Claims 1, 10 and 12 have further been amended for clarification by deleting the description of the Z_1 group. Claims 2 and 13 have been amended for clarification by reciting that A in general formula (I) is a group represented by general formula (IV).

Turning to the Official Action, claims 1-18 stand rejected under 35 U.S.C. §112, first paragraph, for the reasons set forth at pages 2 and 3 of the Official Action. In particular, the Patent Office has taken the position that the specification does not contain support for the enablement of "any type" of substituent. However, Applicants do not assert that "any type" of substituent can be used in the inventive oil-soluble dyes. Rather, according to aspects of the present invention as defined by claims 1, 10 and 12, each of the R_1-R_{13} substituents is capable

of forming a part of an oil-soluble dye represented by the general formula (I). In light of the fact that the general formula (I) compound is an oil-soluble dye, and in view of the extensive list of exemplary substituents set forth in the specification at pages 7-12, one skilled in the art would have been able to determine without undue experimentation the substituents capable of being used in the inventive oil-soluble dyes. Accordingly, for at least the above reasons, withdrawal of the §112, first paragraph rejection is respectfully requested.

Claims 1-18 stand rejected under 35 U.S.C. §112, second paragraph, for the reasons set forth at page 3 of the Official Action. In accordance with the Examiner's suggestions, and as discussed above, claims 1, 10 and 12 have been amended to replace the word "and" after "group," and before "arylsulfonyl," with "or." In addition, claims 1, 10 and 12 have been amended to add the word "and" after "ring," and before "any." Accordingly, withdrawal of the §112, second paragraph rejection is respectfully requested.

Claims 1, 2 and 10-13 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,344,933 (*Mikoshiba et al*). This rejection should be withdrawn for at least the following reasons.

According to one aspect of the present invention as defined by claim 1, an ink-jet ink is provided which comprises a coloring composition including an oil-soluble dye. Claim 10 is directed to a coloring composition comprising an oil-soluble dye. Claim 12 is directed to an ink jet recording method wherein recording is performed using an ink-jet ink that includes a coloring composition including an oil-soluble dye.

Mikoshiba et al does not disclose or suggest each feature of the presently claimed invention. For example, *Mikoshiba et al* does not disclose or suggest an oil-soluble dye

represented by general formula (I), wherein A represents a group represented by one of general formulae (IV) and (VI) to (XX), as recited in claims 1, 10 and 12. By comparison, *Mikoshiba et al* discloses dyes represented by the general formulae (I), (II) and (III) at columns 2 and 3 thereof. Clearly, *Mikoshiba et al* fails to disclose or suggest that the dyes of general formulae (I), (II) and (III) include the group A recited in claims 1, 10 and 12. That is, *Mikoshiba et al* fails to disclose or suggest a dye which includes a group represented by one of general formulae (IV) and (VI) to (XX). For at least this reason, withdrawal of the §102(b) rejection over *Mikoshiba et al* is respectfully requested.

Claims 1, 2 and 10-13 stand rejected under 35 U.S.C. §102(a) as being anticipated by Japanese Patent Document No. 2000-327939 (*JP '939*). Without addressing the Patent Office's assertion that *JP '939* is anticipatory, it is respectfully noted that the filing date of Japanese Patent Application No. 2000-087538, to which the present application claims the benefit of foreign priority under 35 U.S.C. §119, predates the publication date of *JP '939*.¹ As such, perfecting the foreign priority claim in the present application would remove *JP '939* from qualifying as a §102(a) prior art document. Applicants are in the process of obtaining an English translation of the Japanese priority application, and a copy of same will be promptly forwarded to the Examiner for her consideration. For at least the above reasons, the §102(a) rejection should be withdrawn upon the filing by Applicants of the English translation of the Japanese priority application in the Patent Office.

¹The Japanese priority application was filed on March 27, 2000, which predates the November 28, 2000 publication date of *JP '939*.

Claims 1-14 and 16-18 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,031,019 (*Tsutsumi et al*) in view of either *Mikoshiha et al* or *JP '939*. Withdrawal of this rejection is respectfully requested for at least the following reasons.

Tsutsumi et al fails to disclose or suggest each feature of the presently claimed invention. For example, as acknowledged by the Patent Office at page 7 of the Official Action, *Tsutsumi et al* does not disclose or suggest the oil-soluble dye recited in claims 1, 10 and 12.

Mikoshiha et al and *JP '939* fail to cure this deficiency of *Tsutsumi et al*. As explained above with respect to the §102(b) rejection over *Mikoshiha et al*, *Mikoshiha et al* has no disclosure or suggestion of an oil-soluble dye represented by general formula (I), wherein A represents a group represented by one of general formulae (IV) and (VI) to (XX), as recited in claims 1, 10 and 12. Further, as discussed above, *JP '939* would not qualify as §102(a) prior art upon Applicants' filing of an English translation of the Japanese priority application. For at least these reasons, withdrawal of this §103(a) rejection is respectfully requested upon the filing by Applicants of the English translation of the Japanese priority application.

Claims 1-3, 5, 7, 10-14, 16 and 17 stand rejected under 35 U.S.C. §103(a) as being obvious over Japanese Patent Document No. 08-269374 (*JP '374*) in view of either *Mikoshiha et al* or *JP '939*. Withdrawal of this rejection is respectfully requested for at least the following reasons.

JP '374 fails to disclose or suggest each feature of the presently claimed invention. For example, as acknowledged by the Patent Office at page 10 of the Official Action, *JP '374* does not disclose or suggest the oil-soluble dye recited in claims 1, 10 and 12. In addition, as explained above, *Mikoshiha et al* does not disclose or suggest an oil-soluble dye represented by

general formula (I), wherein A represents a group represented by one of general formulae (IV) and (VI) to (XX), as recited in claims 1, 10 and 12. And as discussed above, *JP '939* would not qualify as §102(a) prior art upon Applicants' filing of an English translation of the Japanese priority application. Thus, for at least the above reasons, withdrawal of this §103(a) rejection is respectfully requested upon the filing by Applicants of the English translation of the Japanese priority application.

Claims 4 and 15 stand rejected under 35 U.S.C. §103(a) as being obvious over *JP '374* in view of either *Mikoshiba et al* or *JP '939*, and further in view of U.S. Patent No. 6,344,497 (*Meyrick et al*) and U.S. Patent No. 4,665,411 (*Kiritani et al*). Withdrawal of this rejection is respectfully requested for at least the following reasons.

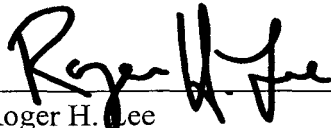
The deficiencies of *JP '374* and *Mikoshiba et al* are discussed above. Also discussed above is the impending disqualification of *JP '939* from qualifying as §102(a) prior art with respect to the present application. *Meyrick et al* and *Kiritani et al* fail to cure the above-described deficiencies of *JP '374* and *Mikoshiba et al*. In this regard, like the other applied art, *Meyrick et al* and *Kiritani et al* do not disclose or suggest an oil-soluble dye represented by general formula (I), wherein A represents a group represented by one of general formulae (IV) and (VI) to (XX), as recited in claims 1, 10 and 12. Accordingly, for at least the above reasons, withdrawal of this §103(a) rejection is respectfully requested upon the filing by Applicants of the English translation of the Japanese priority application.

From the foregoing, further and favorable action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: _____



Roger H. Lee
Registration No. 46,317

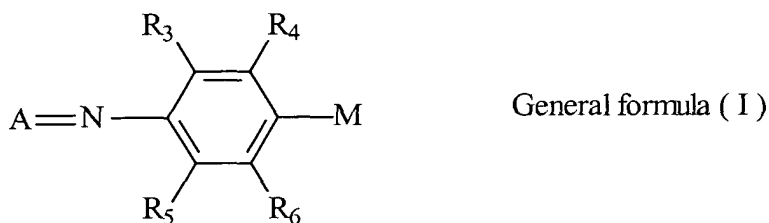
P.O. Box 1404
Alexandria, VA 22313-1404
(703) 836-6620

Date: December 9, 2002

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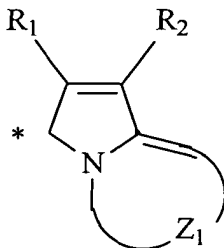
Marked-up claims 1, 2, 10, 12 and 13

1. (Amended) An ink-jet ink comprising a coloring composition including an oil-soluble dye represented by following general formula (I):



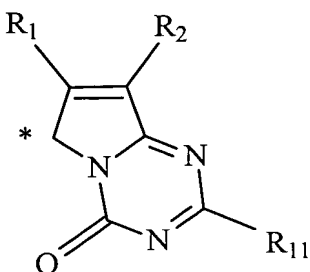
wherein A represents a group [represented by general formula (II)] represented by one of general formulae (IV) and (VI) to (XX), R_3 - R_6 each independently represents a hydrogen atom or a substituent, M represents $-OY$ or $-N(R_7)(R_8)$, Y represents a hydrogen atom or a cation necessary for neutralizing charge of an oxygen ion, R_7 and R_8 each independently represents [one of] an alkyl group, aryl group, heterocyclic group, acyl group, alkylsulfonyl group, [and] or arylsulfonyl group, R_7 and R_8 may be bonded to each other to form a ring, any of a pair R_4 and R_7 and a pair R_6 and R_8 may be bonded to each other to form a ring, and any of a pair R_3 and R_4 and a pair R_5 and R_6 may be bonded to each other to form a ring, and general [formula (II) is] formulae (IV) and (VI) to (XX) are as follows:

[



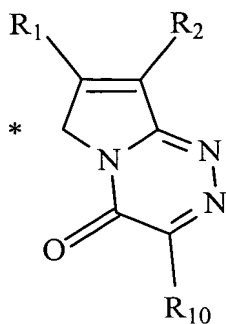
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Marked-up claims 1, 2, 10, 12 and 13

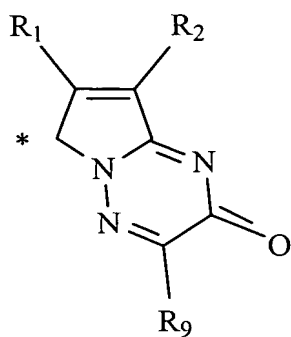


General formula (IV)

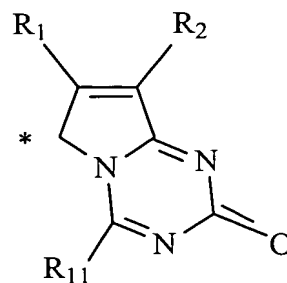
General formula (VI)



General formula (VII)



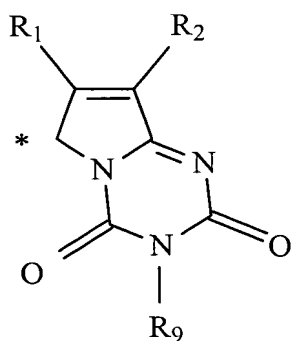
General formula (VIII)



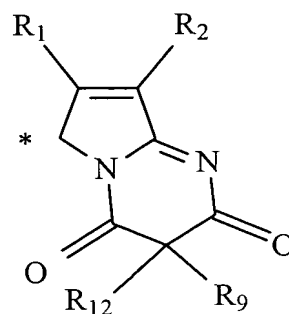
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Marked-up claims 1, 2, 10, 12 and 13

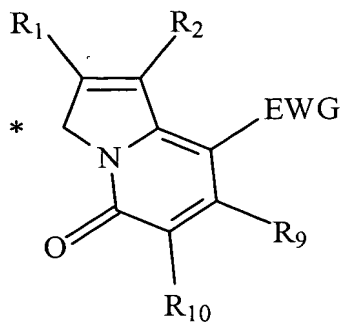
General formula (IX)



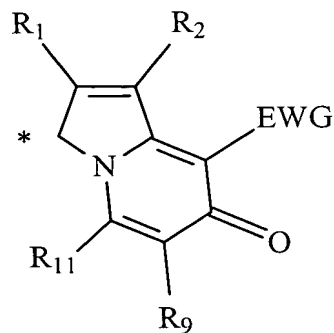
General formula (X)



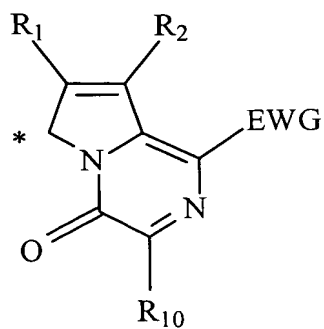
General formula (XI)



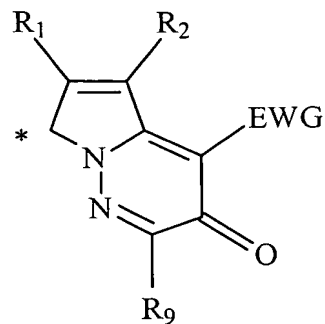
General formula (XII)



General formula (XIII)



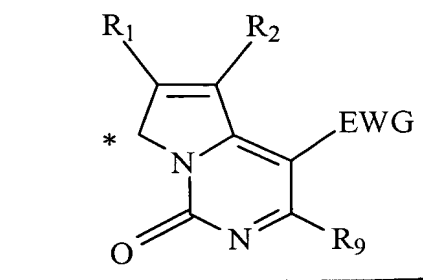
General formula (XIV)



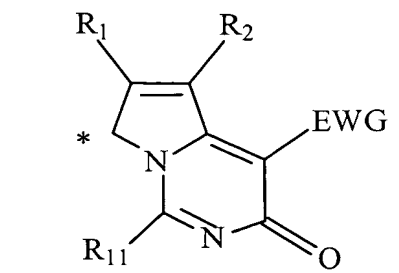
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Marked-up claims 1, 2, 10, 12 and 13

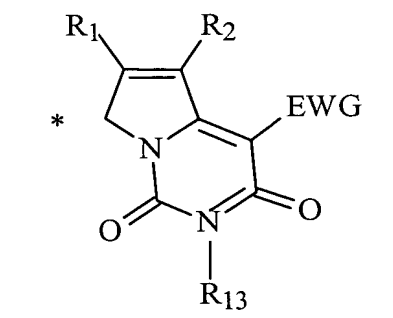
General formula (XV)



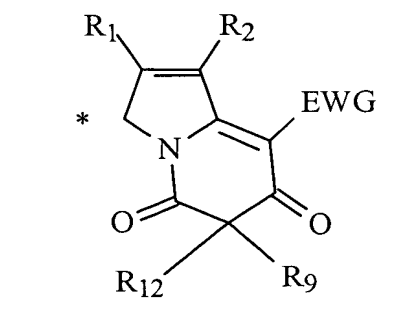
General formula (XVI)



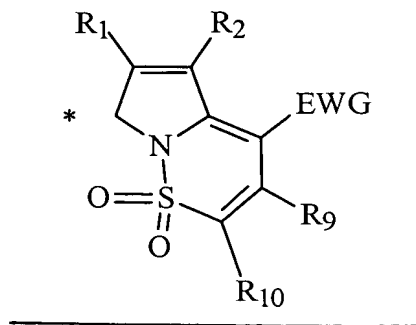
General formula (XVII)



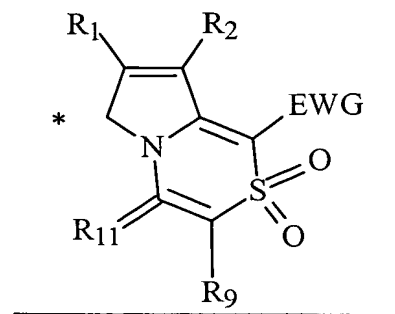
General formula (XVIII)



General formula (XIX)



General formula (XX)

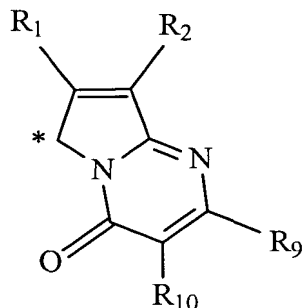


Attachment to AMENDMENT dated December 9, 2002

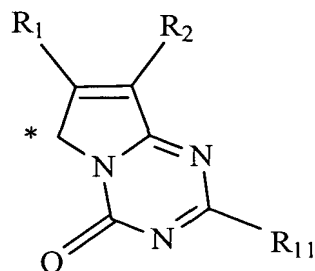
Marked-up claims 1, 2, 10, 12 and 13

wherein R_1 and R_9 - R_{13} each independently represents a hydrogen atom or a substituent, R_2 represents a substituent, [Z_1 represents a group of non-metal atoms necessary for forming a 6-membered nitrogen-containing heterocycle,] EWG represents an electron-withdrawing group having a Hammett's substituent constant σ_p value of 0.35 or more, and * represents a bonding position.

2. (Amended) An ink-jet ink according to claim 1, wherein A in general formula (I) is a group represented by [one of following general formula (III) and] general formula (IV)[:



General formula (III)



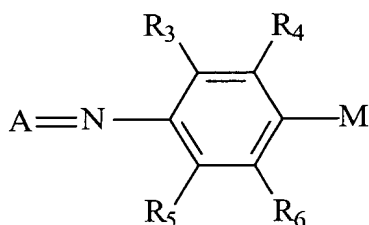
General formula (IV)

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Attachment to AMENDMENT dated December 9, 2002

Marked-up claims 1, 2, 10, 12 and 13

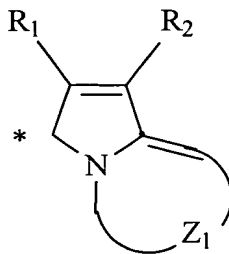
10. (Amended) A coloring composition comprising an oil-soluble dye represented by following general formula (I):



General formula (I)

wherein A represents a group [represented by general formula (II)] represented by one of general formulae (IV) and (VI) to (XX), R₃-R₆ each independently represents a hydrogen atom or a substituent, M represents -OY or -N(R₇)(R₈), Y represents a hydrogen atom or a cation necessary for neutralizing charge of an oxygen ion, R₇ and R₈ each independently represents [one of] an alkyl group, aryl group, heterocyclic group, acyl group, alkylsulfonyl group, [and] or arylsulfonyl group, R₇ and R₈ may be bonded to each other to form a ring, any of a pair R₄ and R₇ and a pair R₆ and R₈ may be bonded to each other to form a ring, and any of a pair R₃ and R₄ and a pair R₅ and R₆ may be bonded to each other to form a ring, and general [formula (II) is] formulae (IV) and (VI) to (XX) are as follows:

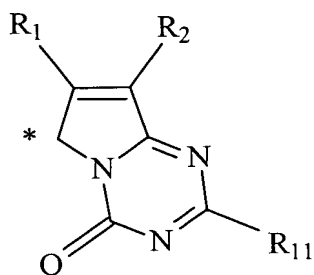
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General formula (II)]

Attachment to AMENDMENT dated December 9, 2002

Marked-up claims 1, 2, 10, 12 and 13

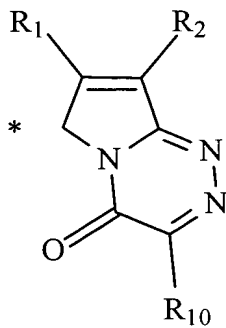


General formula (IV)

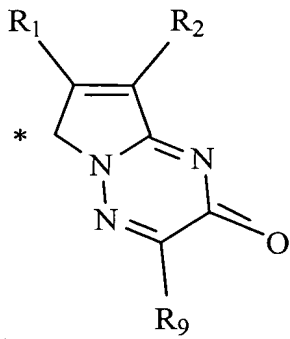
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Marked-up claims 1, 2, 10, 12 and 13

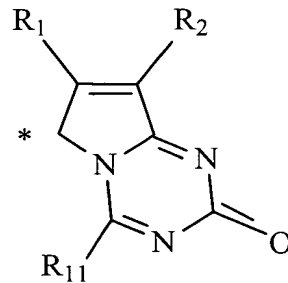
General formula (VI)



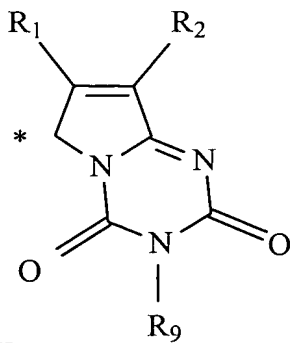
General formula (VII)



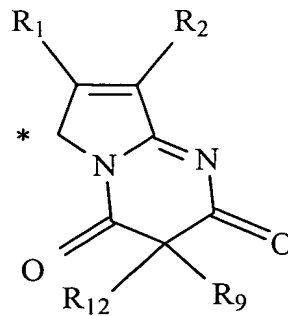
General formula (VIII)



General formula (IX)



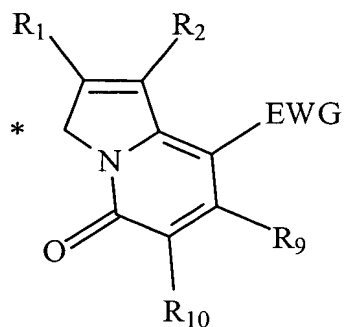
General formula (X)



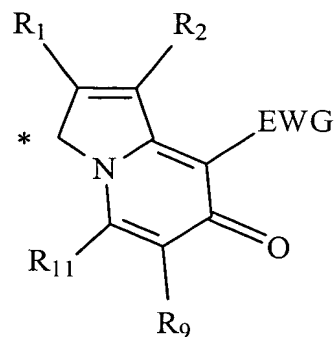
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Marked-up claims 1, 2, 10, 12 and 13

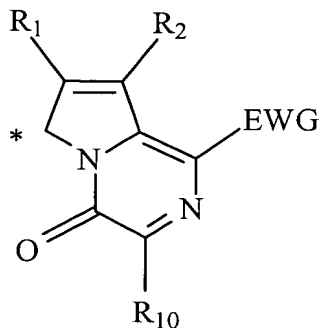
General formula (XI)



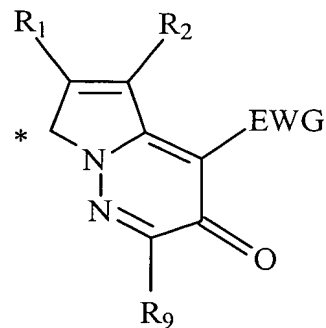
General formula (XII)



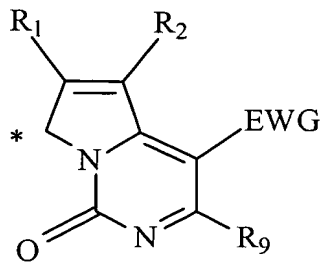
General formula (XIII)



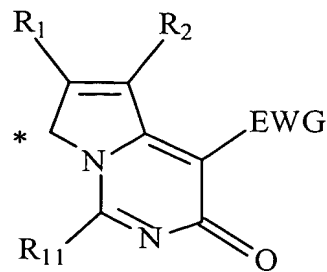
General formula (XIV)



General formula (XV)



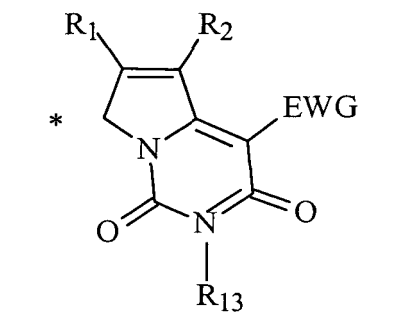
General formula (XVI)



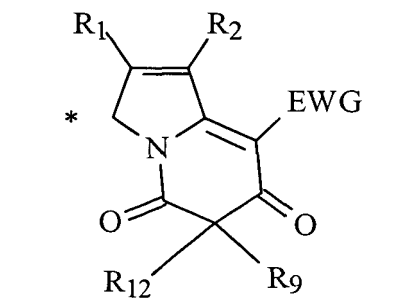
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Marked-up claims 1, 2, 10, 12 and 13

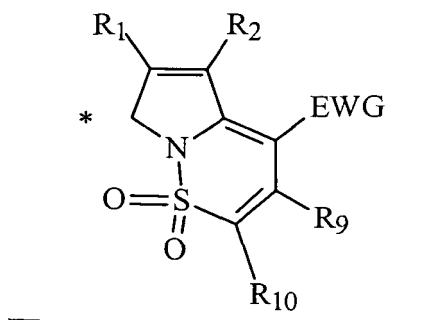
General formula (XVII)



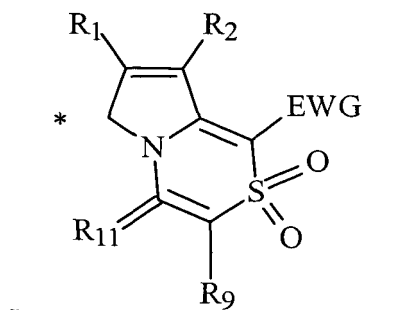
General formula (XVIII)



General formula (XIX)



General formula (XX)

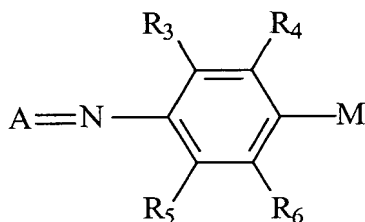


wherein R₁ and R₉-R₁₃ each independently represents a hydrogen atom or a substituent, R₂ represents a substituent, [Z₁ represents a group of non-metal atoms necessary for forming a 6-membered nitrogen-containing heterocycle,] EWG represents an electron-withdrawing group having a Hammett's substituent constant σ value of 0.35 or more, and * represents a bonding position.

Attachment to AMENDMENT dated December 9, 2002

Marked-up claims 1, 2, 10, 12 and 13

12. (Amended) An ink jet recording method wherein recording is performed using an ink-jet ink that includes a coloring composition including an oil-soluble dye represented by following general formula (I):



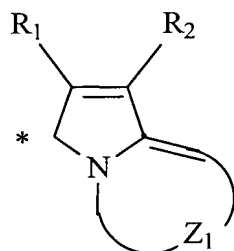
General formula (I)

wherein A represents a group [represented by general formula (II)] represented by one of general formulae (IV) and (VI) to (XX), R₃-R₆ each independently represents a hydrogen atom or a substituent, M represents -OY or -N(R₇)(R₈), Y represents a hydrogen atom or a cation necessary for neutralizing charge of an oxygen ion, R₇ and R₈ each independently represents [one of] an alkyl group, aryl group, heterocyclic group, acyl group, alkylsulfonyl group, [and] or arylsulfonyl group, R₇ and R₈ may be bonded to each other to form a ring, any of a pair R₄ and R₇ and a pair R₆ and R₈ may be bonded to each other to form a ring, and any of a pair R₃ and R₄ and a pair R₅ and R₆ may be bonded to each other to form a ring, and general [formula (II) is] formulae (IV) and (VI) to (XX) are as follows:

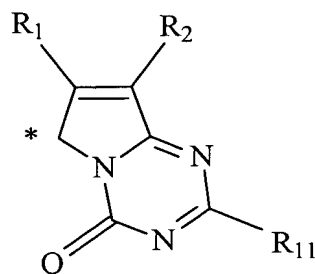
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Marked-up claims 1, 2, 10, 12 and 13

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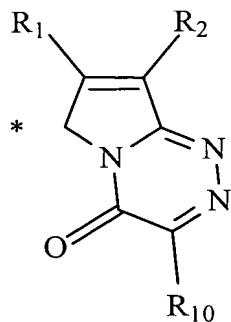


General formula (II)]



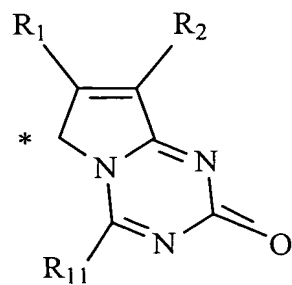
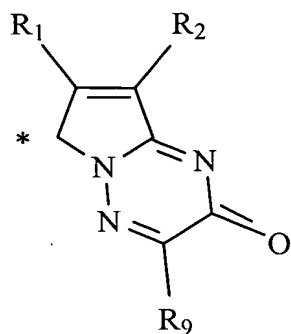
General formula (IV)

General formula (VI)



General formula (VII)

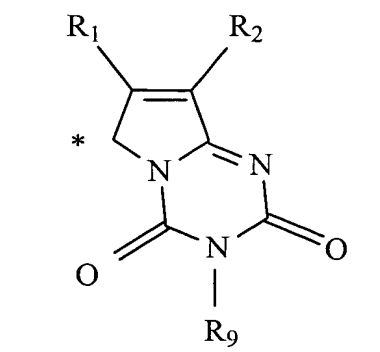
General formula (VIII)



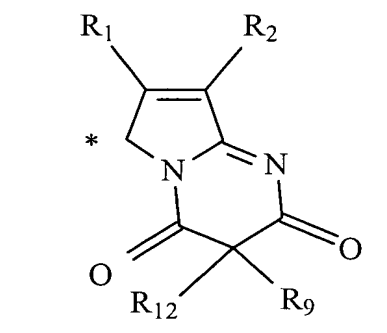
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Marked-up claims 1, 2, 10, 12 and 13

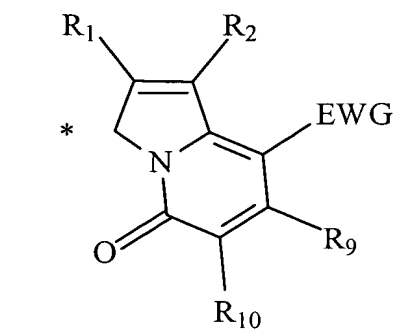
General formula (IX)



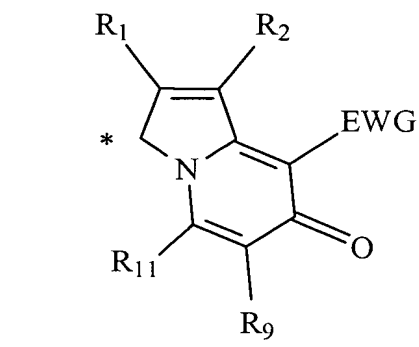
General formula (X)



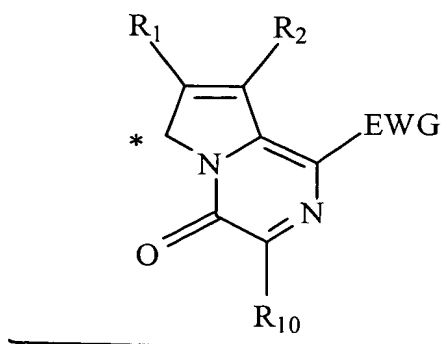
General formula (XI)



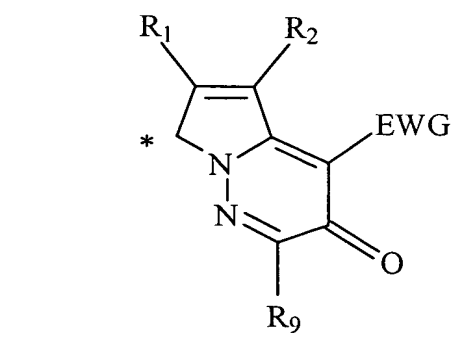
General formula (XII)



General formula (XIII)



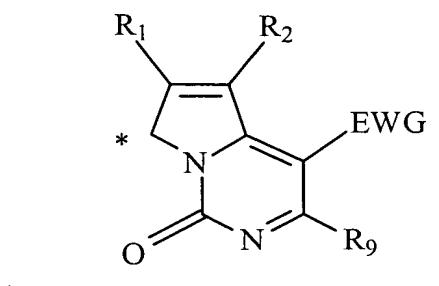
General formula (XIV)



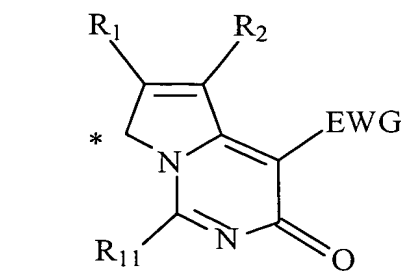
Attachment to AMENDMENT dated December 9, 2002

Marked-up claims 1, 2, 10, 12 and 13

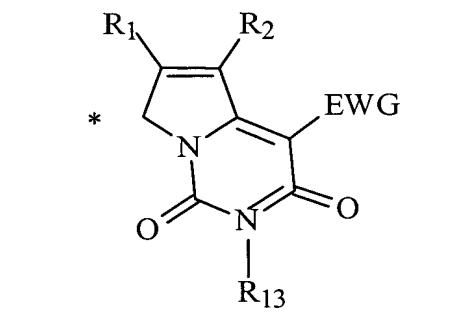
General formula (XV)



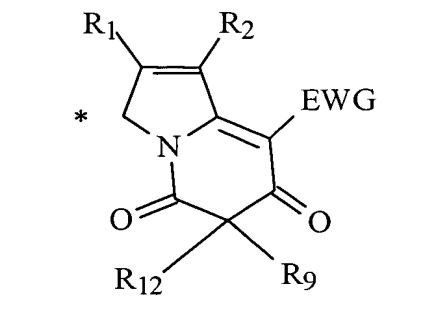
General formula (XVI)



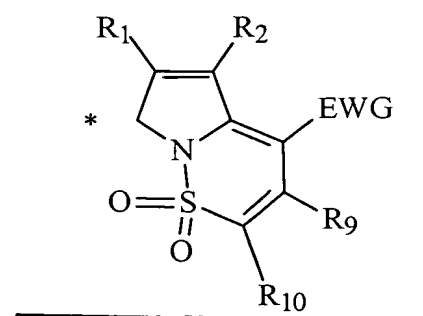
General formula (XVII)



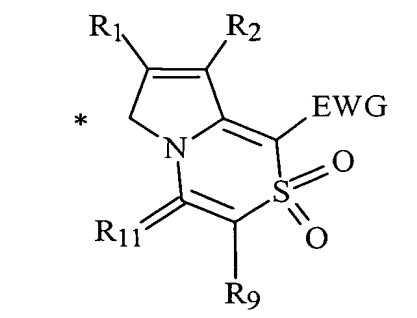
General formula (XVIII)



General formula (XIX)



General formula (XX)

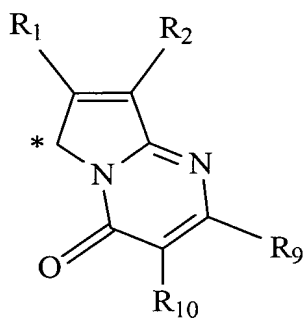


Attachment to AMENDMENT dated December 9, 2002

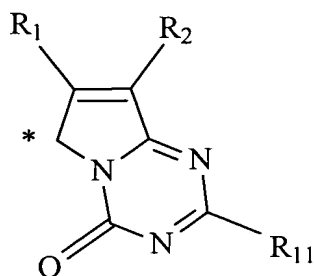
Marked-up claims 1, 2, 10, 12 and 13

wherein R_1 and R_9 - R_{13} each independently represents a hydrogen atom or a substituent, R_2 represents a substituent, [Z_1 represents a group of non-metal atoms necessary for forming a 6-membered nitrogen-containing heterocycle,] EWG represents an electron-withdrawing group having a Hammett's substituent constant σ value of 0.35 or more, and * represents a bonding position.

13. (Amended) An ink jet recording method according to claim 12, wherein A in general formula (I) is a group represented by [one of following general formula (III) and] general formula (IV)[:



General formula (III)



General formula (IV)

I.